



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,850	03/22/2004	Victor M. Casella	311.30B	2468
27019	7590	06/27/2006	EXAMINER	
THE CLOROX COMPANY			KUMAR, PREETI	
P.O. BOX 24305			ART UNIT	
OAKLAND, CA 94623-1305			PAPER NUMBER	

1751

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,850

Applicant(s)

CASELLA ET AL.

Examiner

Preeti Kumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 1-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 68-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-70 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/22/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-31, 58-67, drawn to a method of increasing the fabric protective properties of a fabric comprising the steps of depositing a composition onto the fabric and curing, classified in class 252, subclass 8.63.
 - II. Claims 32-49, drawn to a method of treating a fabric that is laundered comprising the steps of immersing the fabric in a treatment liquor, adding a composition comprising a hydrophobic agent, rinsing, drying, and curing, classified in class 8, subclass 137.
 - III. Claims 50-53, drawn to a method of increasing the water repellency of a fabric comprising the steps of depositing a composition onto the fabric and curing and increasing the initial water contact angle, classified in class 252, subclass 8.63.
 - IV. Claims 54-57, drawn to a method of increasing the oil repellency of a fabric comprising the steps of depositing a composition comprising a fluoropolymer onto the fabric and curing and increasing the initial oil contact angle, classified in class 252, subclass 8.63.
 - V. Claims 68-70, drawn to a method of treating fabrics in a washing machine, classified in class 8, subclass 137.
2. Inventions I-V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of

Art Unit: 1751

operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are different methods that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects. Specifically, the methods of groups I-V are unrelated since they comprise distinct method steps using independent compositions for treating fabrics. The method of group I has distinct modes of operation that effects the deposition of a hydrophobic agent not specific to a laundry washing machine. The method of group II has distinct modes of operation that effects laundering with additional rinsing steps. The method of group III has distinct modes of operation that effects water repellency. The method of group IV has distinct modes of operation with a fluoropolymer that effects oil repellency. The method of group V has distinct modes of operation within a washing machine.

3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, and because of their recognized divergent subject matter, and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mike Petrin on June 15, 2006 a provisional election was made with traverse to prosecute the invention of Group V, claims 68-70. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-67 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 68-70 are rejected under 35 U.S.C. 103(a) as obvious over Haq et al. (US 6,075,003).

Haq et al. teach a fabric laundry treatment composition comprising: a) a fluorocarbon polymer or a fluorocarbon copolymer or mixtures thereof; b) a deposition aid comprising a cationic softening compound or a polymeric delivery aid or mixtures thereof. See abstract.

Haq teaches that the fluorocarbon polymer is a perfluoroalkyl acrylic copolymer, a perfluoroalkyl methacrylic copolymer, a fluorinated substituted urethane or a fluorinated acrylic copolymer. It is further preferred if the fluorocarbon polymer is present as a cationic emulsion. An example of a particularly preferred polymer present as a cationic emulsion is Zonyl 6991 (trademark ex Du Pont) an acrylate polymer. It is

Art Unit: 1751

advantageous if the cationic emulsion of fluoropolymer further comprises a short chain carboxylic acid. See col.2. Haq et al. illustrate the utility of specifically 18% active fluoropolymer in col.6, ln.63.

Regarding the hydrophobic agent, Haq et al. teach that it is preferable if the cationic emulsion of fluoropolymer further comprises a paraffin wax. See col.2,ln.38.

Regarding the curing step as recited in the instant claims, Haq et al. teach that after treatment of laundry with the fabric conditioner of the invention the laundry is heat treated to cure the fluorocarbon polymer by tumble drying the laundry or by ironing. See col.2, ln.40-45.

Regarding the product form, Haq et al. teach that the product may be in any form such as liquid or solid compositions. Solid composition in this context includes compositions in the form of a tablet, a gel, a paste and preferably granules or a powder. See col.4, ln.45-50.

Regarding the zeta potential modifier, Haq et al. teach that it is advantageous for environmental reasons to use quaternary ammonium material that is biologically degradable. Specifically Haq et al. teach suitable deposition aids include cationic fabric softening compounds and polymeric delivery aids that are able to attach themselves to the fluorocarbon soil release agent and cause enhanced delivery to the fabric. Suitable cationic fabric softening compounds are water insoluble quaternary ammonium material. A preferred cationic softener is distearyl dimethyl ammonium chloride. It is preferred if the long chain alkyl or alkenyl groups of the fabric softening compound are predominantly linear. Di(tallowyloxyethyl)dimethyl ammonium chloride, available from

Art Unit: 1751

Hoechst, is especially preferred. A second preferred type of quaternary ammonium material include 1,2 bis[hardened tallowoxy]-3-trimethylammonium propane chloride. Another form of preferred polymeric delivery aids are cationic polymers, for example cationic starch derivatives, cationic cellulose derivatives, guar gums, quaternized protein derivatives, homo- and co-polymers of dimethyldiallylammonium chloride, and homo- and co-polymers of quaternized dimethylaminoethyl methacrylate. Please see col.3-4.

Regarding various additives, Haq et al. teach The composition can also contain one or more optional ingredients, selected from non-aqueous solvents, pH buffering agents, perfumes, perfume carriers, fluorescers, colorants, hydrotropes, antifoaming agents, antiredeposition agents, polymeric or other thickeners, enzymes, optical brightening agents, opacifiers, anti-shrinking agents, anti-wrinkle agents, anti-spotting agents, germicides, fungicides, anti-oxidants, anti-corrosion agents, drape imparting agents, antistatic agents and ironing aids. Please see col.4, ln.34-44.

Haq et al. teach a fabric laundry treatment composition comprising:

- a) a fluorocarbon polymer or a fluorocarbon copolymer or mixtures thereof;
- b) a deposition aid comprising a cationic softening compound or a polymeric delivery aid or mixtures thereof. The examples in col.5-8 illustrate the utility of the cationic zeta potential modifier in a ratio encompassed by the instant claims. A further aspect of the invention provides a method of treating fabrics to provide them with soil repelling properties comprising the steps of: i) adding the formulation described above to water;

Art Unit: 1751

ii) washing, or preferably rinsing, laundry in the resulting liquor; iii) drying the laundry; iv) ironing the laundry at a temperature above 150.degree. C. See examples in col.5-8.

Haq et al. do not teach a method of treating a fabric in a washing machine with a composition comprising a hydrophobic agent and a zeta potential modifier and curing said fabric at a temperature above ambient temperature but less than 100 C.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to treat a fabric with a composition comprising a hydrophobic agent and a zeta potential modifier and curing said fabric at a temperature above ambient temperature but less than 100 C, as recited by the instant claims, because Haq et al. teach the optional treatment of the fabric with an iron and further suggest the use of a tumble dryer which provide heat at various temperatures.

Also, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to treat a fabric in a washing machine, as recited by the instant claims, because the teachings of Haq et al. suggest washing or rinsing the fabric with the treatment composition in general.

8. Claims 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gresser (US 4,724,095) in view of Haq et al. (US 6,075,003).

Gresser teaches a detergent composition adopted for the washing of a fibrous textile substrate to impart stain repellency and antiredeposition properties comprising a composition having hydrophilic/hydrophobic anti-redeposition copolymer which comprises at least one of the recurring units ethylene oxide and alkylene oxide, said copolymer being such as to reduce the zeta potential of the fibers of said textile

Art Unit: 1751

substrate to a value of 0.5 times or less the zeta potential of the bare fiber content thereof, and said effective amount being such that at least 0.02 mg of said copolymer is adsorbed onto said textile fibers per gram of substrate. See abstract.

Specifically regarding the hydrophobic agent, Gresser teaches in col.6,ln.9-18, hydrophobic agents encompassed by the material limitations of the instant claims. The prior art, Gresser, is silent as to the claimed properties of the hydrophobic agent and do not explicitly teach the limitations to the melting point or glass transition temperature of the hydrophobic agent. However, it is reasonable to presume that said limitations are encompassed by the invention of Gresser because the presumption is supported by the use of similar materials (i.e. clothing garments) and in the similar production steps (i.e. contacted with hydrophobic agent in a washing machine) to produce stain repellent textile. The burden is upon the applicant to prove otherwise.

Regarding the zeta potential modifier, Gresser teaches the utility of various cationic agents, namely, silica, sodium silicate, sodium stearate, and triethanolamine. See col.6, 5, 31, 39 and col.9,ln.11.

Specifically regarding the fluoropolymer, Gresser teaches the utility of a fluorescent whitening agent having the tradename Tinopal DMSX. See col.6,ln.43.

Regarding the additives of claim 70, Gresser teaches that the detergent composition comprises various non-ionic surface active agent, such as, for example, polyoxyethylenated alkylphenols, polyoxyethylenated aliphatic alcohols, glycols and polyglycols. See col.9,ln.1-5.

Art Unit: 1751

In col.10, case 3, Gresser illustrates that the antiredeposition composition comprising the hydrophobic agent, zeta potential modifier and fluoropolymer is added to the wash medium before the wash cycle of the washing machine containing the fabrics to be treated.

Gresser does not teach curing the fabric at a temperature above ambient temperature but less than 100 C, as recited by the instant claims.

Haq et al. are relied upon as set forth above. Specifically, Haq et al. teach treating laundry with the hydrophobic agent, zeta potential modifier and fluoropolymer during the domestic rinsing of laundry and then tumble drying. See col.5,ln.25 and col.2,ln.43.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to curing the fabric at a temperature above ambient temperature but less than 100 C, as recited by the instant claims, because Gresser in combination with Haq et al. teach the treatment of the fabric with a composition comprising a hydrophobic agent, zeta potential modifier, and fluoropolymer in a washing machine and further suggest the use of a tumble dryer which provide heat at various temperatures. One of ordinary skill in the art would have been motivated to modify the teachings of Gresser with a drying/curing step as taught by Haq et al. because it would have been obvious to dry the treated fabric of Gresser and furthermore, Haq et al. provide the motivation to heat laundry to cure the fluoropolymer by tumble drying at various temperatures in general.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Mc Ginty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Preeti Kumar *PK*
Examiner
Art Unit 1751

PK

Douglas McGinty
DOUGLAS MCGINTY
SUPERVISORY PATENT EXAMINER
1751